

AMENDMENTS

In the Claims:

Please substitute the claims as indicated below for the claims of the same number. All claims have been included below. Per 37 CFR 1.121, the current status of all claims has been indicated, the amended text of currently amended claims has been marked accordingly, and text of pending claims not being currently amended have been included as a clean version. Claims 4 and 8 have been currently amended. Claim 20 has been added as a new claim. All claims are included in this amendment.

1. (Canceled) An orthopedic device for reinforcing an anatomic joint of a body comprising:

a superelastic support comprising a unitary superelastic shape memory alloy consisting of at least one tightening link, and at least one spring link integral to and extending from said tightening link;

a covering encapsulating said superelastic support;

wherein said tightening link consists of a curved preshaped configuration in which said tightening link partially extends around and compresses against said body on one side of said anatomic joint; said tightening link enlarges in response to an external, expansion force for placement around said body and returns towards said preformed shape once said external, expansion force is removed; and

wherein said spring link consists of an integrated hinge located adjacent said anatomic joint; said spring link deflects at said hinge in response to an external, deflection force and returns to its resting shape upon removal of said external, deflection force;

2. (Canceled) The device of claim 1 wherein said spring link consists of at least one loop at said hinge;

3. (Canceled) The device of claim 1 further comprising a hinge stop associated with said hinge of said spring link;

wherein said hinge stop consists of a channel through which said superelastic support is placed and a protrusion that limits deflection of said hinge;

4. (Currently Amended) ~~The device of claim 1~~ An orthopedic device for reinforcing an anatomic joint of a body comprising:

a superelastic support comprising a unitary superelastic shape memory alloy comprising a first tightening link, a second tightening link, a first spring link, and a second spring link;

a covering encapsulating said superelastic support;

a first locking mechanism coupled to said first tightening link;

a second locking mechanism coupled to said second tightening link;

wherein said tightening links enlarge in response to an external force for placement around said body and compress against said body once said external force is removed;

wherein said first spring link and said second spring link comprises an integrated hinge located adjacent said anatomic joint; said spring links deflect at said hinge in response to an external, deflection force and return to their resting shape upon removal of said external, deflection force;

wherein said ~~superelastic support consists of a~~ first tightening link is located above said joint, a ~~said~~ second tightening link is located below said joint, a ~~said~~ first spring link extending from said first and second tightening links, a ~~said~~ second spring link extending from said first and second tightening links and intersecting said first spring link;

wherein said device further comprises an interconnect means that secures said first spring link and said second spring link at said intersection;

5. (Canceled) The device of claim 1 wherein said tightening link compresses against said body as said spring link is deflected;

6. (Canceled) The device of claim 1 further comprising a locking mechanism attached to opposing sides of said tightening link;

wherein engagement of said locking mechanism prevents enlargement of said tightening link;

7. (Canceled) An orthopedic device for directing the motion of an anatomic joint of a body comprising:

a superelastic support comprising a unitary superelastic shape memory alloy consisting of a first tightening link located above said anatomic joint, a second tightening link located below said anatomic joint, a first spring link integral to, extending from and connecting said first and second tightening links on a first side of said anatomic joint, and a second spring link integral to, extending from and connecting said first and second tightening links on a second side different than said first side;

wherein said first and second tightening links are curved such that they partially extend around and compress against said body and

wherein said first and second spring links deflect from first, resting configurations to second, stressed configurations different from said first configurations in response to an external force, and return toward said first configurations upon reduction or removal of said external force;

8. (Currently Amended) The device of claim 7 An orthopedic device for directing the motion of an anatomic joint of a body comprising:

a superelastic support comprising a unitary superelastic shape memory alloy consisting of a first tightening link located above said anatomic joint, a second tightening link located below said anatomic joint, a first spring link integral to, extending from and connecting said first and second tightening links on a first side of said anatomic joint, and a second spring link integral to, extending from and connecting said first and second tightening links on a second side different than said first side, a first locking mechanism coupled to said first tightening link, and a second locking mechanism coupled to said second tightening link;

wherein said first and second tightening links compress against said body;

wherein said first and second spring links deflect from first, resting configurations to second, stressed configurations different from said first configurations in response to an external force, and return toward said first configurations upon reduction or removal of said external force;

wherein said first and second spring links intersect at an intersecting region; and
said device further comprises an interconnect mechanism securing said intersecting region together;

9. (Canceled) The device of claim 7 further comprising at least one locking mechanism attached to the sides of said first and second tightening links;

wherein actuation of said locking mechanism prevents enlargement of said tightening link;

10. (Canceled) The device of claim 7 further comprising at least one hinge stop associated with said first or second spring link hinge ;

11. (Canceled) The device of claim 7 wherein said tightening links compress against said body as said spring links are deflected;

12. (Canceled) An orthopedic device for applying decompression to an anatomic structure of a body comprising:

at least one superelastic support comprising a unitary superelastic shape memory alloy consisting of a first tightening link comprising a first side, a second side, and a curved preformed configuration between said first and second sides, a second tightening link comprising a first side, a second side, and a curved preformed configuration between said first and second sides, and at least one spring link integral to, extending from and connecting said first and second tightening links;

at least one locking mechanism attached to said first and second tightening links; wherein said locking mechanism secures said first sides and said second sides together; and

at least one stiffening means connected to said spring link; wherein actuation of said stiffening means deflects said spring link from its preformed configuration to a stressed configuration different from said preformed configuration;

13. (Canceled) The device of claim 12 wherein said first tightening link has a radius of curvature different from said second tightening link;

14. (Canceled) The device of claim 12 wherein said spring link consists of a loop;

15. (Canceled) The device of claim 12 wherein a plurality of spring links extend from and connect said first and second tightening links, and said stiffening means adjusts the lateral separation of said spring links;

16. (Canceled) The device of claim 12 wherein said stiffening means adjusts the vertical separation of said first and second tightening links;

17. (Canceled) The device of claim 12 wherein said spring link further consists of an integrated hinge that enables deflection into a configuration different from that observed during actuation of said stiffening means;

18. (Canceled) The device of claim 12, wherein said at least one superelastic support comprises nickel titanium;

19. (Canceled) The device of claim 12, wherein said at least one superelastic support comprises a single wire thermally formed into said tightening links and said spring link;

20. (New) An orthopedic device for reinforcing an anatomic joint of a body comprising:

a superelastic support comprising a unitary superelastic shape memory alloy comprising a first tightening link, a second tightening link, a first spring link, and a second spring link;

a covering encapsulating said superelastic support;

a first locking mechanism coupled to said first tightening link;

a second locking mechanism coupled to said second tightening link;

wherein said first tightening link is secured to said body above said joint, said second tightening link is secured to said body below said joint, said first spring link comprises an